

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

(Claims 1 through 9 are cancelled)

10. (new): A rotation angle detection device comprising:
a stator provided with a one-phase excitation winding and
two-phase output windings; and
a rotor having salient poles,
characterized in that the two-phase output windings are
wound around a plurality of teeth of the stator, and
respective numbers of turns of the two-phase output
windings are obtained by using m-phase windings (m is an integer
of 3 or more) defined in advance to convert the numbers of turns
of the m-phase windings into those of two-phase windings.

11. (new): A rotation angle detection device according to
claim 10,
characterized in that, when the numbers of turns of the m-
phase windings (m is an integer of 3 or more) are converted into
those of two-phase windings, the conversion is performed
according to the following expression:

$$N_{\alpha i} = k \sum_{n=1}^m N_{ni} \cos(\gamma + \frac{2(n-1)}{m} \pi)$$

$$N_{\beta i} = k \sum_{n=1}^m N_{ni} \sin(\gamma + \frac{2(n-1)}{m} \pi)$$

(γ represents an arbitrary constant, k represents an arbitrary constant excluding zero, a subscript i represents a number of a tooth, α and β represent two-phase windings after conversion, and n represents nth phase before conversion. In other words, $N_{\alpha i}$ and $N_{\beta i}$ represent the number of turns of the α -phase and β -phase windings in the i th tooth, respectively, and N_{ni} represents the number of turns of nth phase winding of the i th tooth.)

12. (new) : A rotation angle detection device according to claim 10,

characterized in that the number of teeth of the stator is assumed to be $3n$ (n is a natural number).

13. (new) : A rotation angle detection device according to claim 10,

characterized in that, in the case in which the number of teeth of the stator is an odd number, a winding pattern of the excitation winding is a pattern repeated by the number of times of a number which is the same as a value of a divisor of the number of teeth.

characterized in that the number of teeth of the stator is nine, and a shaft multiple angle is 4 or 8.

15. (new): A rotation angle detection device according to claim 12,

characterized in that the number of teeth of the stator is nine, and a shaft multiple angle is 4 or 8.

16. (new): A rotation angle detection device according to claim 12,

characterized in that the number of teeth of the stator is twelve, and a shaft multiple angle is 4 or 8.

17. (new): A rotation angle detection device according to claim 10,

characterized in that the numbers of turns of the two-phase output windings are adjusted such that the two-phase output windings do not pickup a magnetic flux of a spatial order which is the same as a spatial order of a change in permeance of the rotor or a magnetic flux of a spatial 0th order.

18. (new): A rotation angle detection device according to claim 10,

characterized in that the numbers of turns of the two-phase output windings are adjusted such that the two-phase output windings do not pick up a specific component of a gap magnetic flux which is generated when a rotation shaft of the rotor and a

center of the stator deviate from each other or when a center and the rotation shaft of the rotor deviate from each other.

19. (new): A dynamo-electric machine, characterized by comprising the rotation angle detection device according to claim 10.